MINNESOTA DEPARTMENT OF TRANSPORTATION

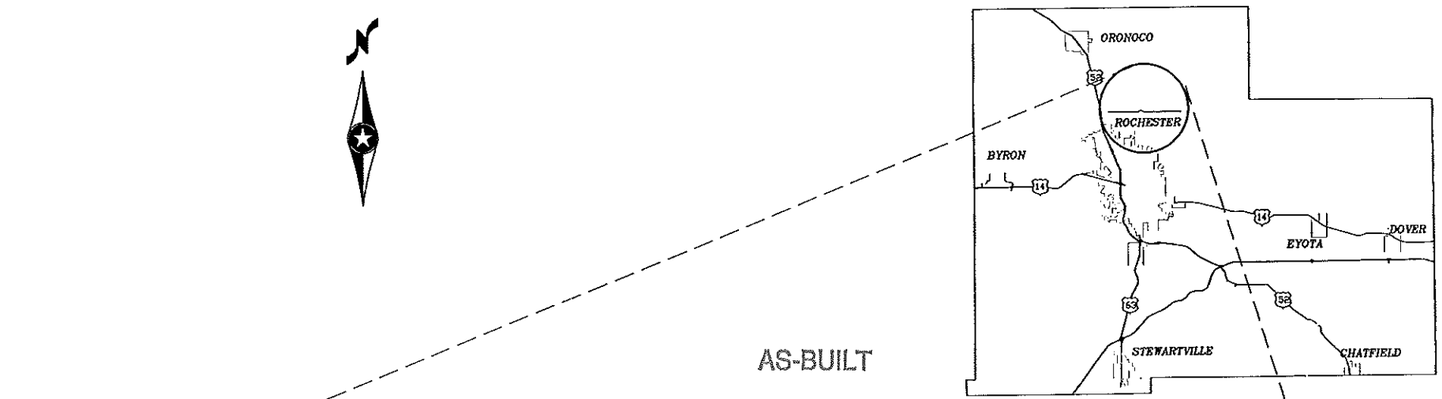
THE COUNTY OF OLMSTED

CONSTRUCTION PLAN FOR BITUMINOUS OVERLAY AND BITUMINOUS SHOULDERS

LOCATED ON C.S.A.H. 14 BETWEEN C.R. 154 E AND T.H. 63 (GEOGRAPHIC DESCRIPTION)
1174' E. OF S.E. COR. SEC. 33 T107N-R14W TO 1100' W. OF SW COR. OF SEC. 31 T108-R13W (LEGAL DESCRIPTION)

SAP NO. 55-614-15 (C.S.A.H. 14)

GROSS LENGTH	18196	FEET	3.446	MILES
BRIDGE-LENGTH	238	FEET	0.045	MILES
EXCEPTIONS-LENGTH	238	FEET	0.045	MILES
NET LENGTH	17958	FEET	3.401	MILES



THE SUBSURFACE UTILITY INFORMATION IN THIS PLAN IS UTILITY QUALITY LEVEL D. THIS QUALITY LEVEL WAS DETERMINED ACCORDING TO THE GUIDELINES OF CI/ASCE 38-02, ENTITLED "STANDARD GUIDELINES FOR THE COLLECTION AND DEPICTION OF EXISTING SUBSURFACE UTILITY DATA.

PLAN SYMBOLS

STATE LINE
COUNTY LINE
TOWNSHIP OR RANGE LINE
SECTION LINE
QUARTER LINE
SIXTEENTH LINE
RIGHT-OF-WAY LINE
PRESENT RIGHT-OF-WAY LINE
CONTROL OF ACCESS LINE
PROPERTY LINE (Except Land Lines)
VACATED PLATTED PROPERTY
CORPORATE OR CITY LIMITS
TRUNK HIGHWAY CENTER LINE
RETAINING WALL
RAILROAD
RAILROAD RIGHT-OF-WAY
RIVER OR CREEK
DRY RUN
DRAINAGE DITCH
DRAIN TILE
CULVERT
DROP INLET
GUARD RAIL
BARBED WIRE FENCE
WOVEN WIRE FENCE
CHAIN LINK FENCE
RAILROAD SNOW FENCE
STONE WALL OR FENCE
HEDGE
RAILROAD CROSSING SIGN
RAILROAD CROSSING BELL
ELECTRIC WARNING SIGN
CROSSING GATE
MEANDER CORNER
SPRINGS
MARSH
TIMBER
ORCHARD
BRUSH
NURSERY
CATCH BASIN
FIRE HYDRANT
CATTLE GUARD
OVERPASS (HIGHWAY OVER)
UNDERPASS (HIGHWAY UNDER)
BRIDGE
BUILDING (ONE STORY FRAME)
F - FRAME C - CONCRETE
S - STONE T - TILE
B - BRICK ST - STUCCO
IRON PIPE OR ROD
MONUMENT (STONE, CONCRETE, OR METAL)
WOODEN HUB
GRAVEL PIT
SAND PIT
BORROW PIT
ROCK QUARRY
SLOPE EASEMENT

UTILITIES SYMBOLS

POWER POLE LINE
TELEPHONE OR TELEGRAPH POLE LINE
JOINT TELEPHONE AND POWER ON POWER POLE
ON TELEPHONE POLES
ANCHOR
STEEL TOWER
STREET LIGHT
PEDESTAL (TELEPHONE CABLE TERMINAL)
GAS MAIN
WATER MAIN
CONDUIT
TELEPHONE CABLE IN CONDUIT
ELECTRICAL CABLE IN CONDUIT
TELEPHONE MANHOLE
ELECTRICAL MANHOLE
BURIED TELEPHONE CABLE
BURIED ELECTRICAL CABLE
AERIAL TELEPHONE CABLE
SEWER (SANITARY OR SEWER)
SEWER MANHOLE

EROSION CONTROL SYMBOLS

TEMPORARY SILT FENCE
RIP RAP DITCH CHECKS

SCALES

PLAN 0 50'
PROFILE 0 50' HORIZ. 0 10' VERT.
CROSS SECTIONS 0 10' HORIZ. 0 10' VERT.
INDEX MAP NOT TO SCALE

GOVERNING SPECIFICATIONS

THE 2005 EDITION OF THE MINNESOTA DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR CONSTRUCTION" SHALL GOVERN.

INDEX

SHEET NO. 1	TITLE SHEET
SHEET NO. 2	ESTIMATED QUANTITIES
SHEET NO. 3	TYPICAL SECTIONS
SHEET NO. 4	ENTRANCE AND BYPASS LANE DETAILS
SHEET NO. 5	MILLING DETAILS
SHEET NO. 6	EDGE LINE RUMBLE STRIP DETAILS
SHEET NO. 7	STRIPING PLAN
SHEET NO. 8	TRAFFIC CONTROL
SHEET NO. 9	CROSS SECTIONS - BYPASS LANE

THIS PLAN CONTAINS 9 SHEETS

C.S.A.H. 14

GRADING & AGGREGATE BASE UNDER:

GRADING, BASE & BITUMINONS ; 55-614-08	1979
GRADING, BASE & BITUMINOUS ; 55-614-10	1991

DESIGN DESIGNATION: SAP 55-614-15

R VALUE = 20 ESAL (20) 957,000
ADT (Current Year)= 6246 (2009) Design Speed 55 mph
ADT (Future Year) = 9994 (2029) Based on STOPPING Sight Distance
Height of eye 3.5' Height of object 2.0'
DHV (Design Hr. Vol.)= _____ Design Speed not achieved at: _____
D (Directional Distr.) = _____ STA. _____ TO STA. _____ mph
T (Heavy Commercial) EST. 5.9% STA. _____ TO STA. _____ mph
SUBGRADE = K= 150
SHOULDER WIDTH 8 ft.
FUNCTIONAL CLASSIFICATION: MAJOR COLLECTOR
SOIL FACTOR = 130
10 TON DESIGN

DESIGN ENGINEER: I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

DATE 6/16/09 REG. NO. 19917
PRINTED NAME: KAYE M. BIENIEK
SIGNED NAME: Kaye M Bieniek
COUNTY DESIGN ENGINEER

DATE 6/16/09 REG. NO. 10397
APPROVED: OLMSTED COUNTY ENGINEER

DISTRICT STATE AID ENGINEER: REVIEWED FOR COMPLIANCE WITH STATE-AID RULES/ POLICY
DATE: 6/22/09

STATE AID ENGINEER: APPROVED FOR STATE AID FUNDING:
DATE: 6/22/09

AS-BUILT

MAR 10 2011

ENGINEERING

STATEMENT OF ESTIMATED QUANTITIES

	ITEM NO.	ITEM	UNIT	NON-PARTICIPATING	PARTICIPATING	TOTAL ESTIMATED QUANTITIES
(1)	2105.602	CONSTRUCT TURN LANES	EACH	1		1
	2112.603	SHOULDER PREPARATION	LN. FT.	30430		30430
(2)	2211.501	AGGREGATE BASE, CLASS 5 MODIFIED	TON	174		174
(3)	2221.501	AGGREGATE SHOULDERING, CLASS 2	TON	3184		3184
(4)	2232.501	MILL BITUMINOUS SURFACE	SQ. YD.	3760		3760
	2232.603	MILLED RUMBLE STRIPS-INTERMITTENT	LN. FT.	18257		18257
(5)	2360.501	TYPE SP 9.5 WEARING COURSE MIXTURE (3,C)	TON	6920 ~~9675~~	~~4483~~	14138
		SP 12.5	Ton	7,218		
	2563.601	TRAFFIC CONTROL	LUMP SUM	1		1
	2580.603	INTERIM PAVEMENT MARKING	LIN. FT.	49062		49062
	2582.502	4" SOLID LINE WHITE-EPOXY	LIN. FT.	39142		39142
	2582.502	4" SOLID LINE YELLOW-EPOXY	LIN. FT.	10819		10819
	2582.502	4" BROKEN LINE YELLOW-EPOXY	LIN. FT.	2508		2508
	2582.502	4" DOUBLE SOLID LINE YELLOW-EPOXY	LIN. FT.	5602		5602

MAINLINE MILLING LOCATIONS
460+78 TO 462+28
606+36 TO 607+86
610+24 TO 611+74
640+50 TO 642+74

STANDARD PLATES

THE FOLLOWING STANDARD PLATES, APPROVED BY THE FEDERAL HIGHWAY ADMINISTRATION SHALL APPLY ON THIS PROJECT.

PLATE NO.	DESCRIPTION
	NUMERICAL INDEX OF STANDARD PLATES
8000 I	STANDARD BARRICADES
9000 D	APPROACHES AND ENTRANCES

CONSTRUCTION NOTES:

(1) FOR NEW BYPASS LANE FROM STA. 582+66 TO 588+76 LT.
EXCAVATION, COMMON OR TOPSOIL BORROW, AND TURF ESTABLISHMENT ARE INCIDENTAL TO THIS ITEM.

(2) QUANTITY IS FOR THE NEW BYPASS LANE AT STA. 582+66 TO 588+76 LT.

(3) QUANTITY INCLUDES 2075 TON FOR SHOULDER PREP, 167 TON FOR FARM, RESIDENTIAL, & FIELD ENTRANCES (SEE SHEET 4).

(4) QUANTITY INCLUDES 876 SQUARE YARDS FOR ROAD APPROACHES, & RESIDENTIAL ENTRANCES,
AND 350 SQUARE YARDS FOR MILLING ALONG CURB SECTION STA. 619+22 TO 623+16 RT.

(5) QUANTITY INCLUDES 432 TON FOR ROAD APPROACHES, FARM, & RESIDENTIAL ENTRANCES.

BASIS OF QUANTITY

AGGREGATE BASE, SHOULDERING - 140 LBS / CU. FT. COMPACTED
2360 BITUMINOUS MIXTURE - 110 LBS. / SQ. YD. / INCH OF DEPTH
BITUMINOUS MATERIAL FOR TACK COAT - 0.05 GALLONS / SQ. YD.
SEED MIXTURE 110B - 100 LBS/ACRE
SEED MIXTURE 150 - 40 LBS/ACRE
SEED MIXTURE 250 - 70 LBS/ACRE
MULCH MATERIAL - 2 TONS/ACRE
DISK ANCHORING - ALL SEEDING AREAS EXCEPT 1:2 SLOPES
COMMERCIAL FERTILIZER - 200 LBS/ACRE ANALYSIS 10-10-10

ESTIMATED QUANTITIES

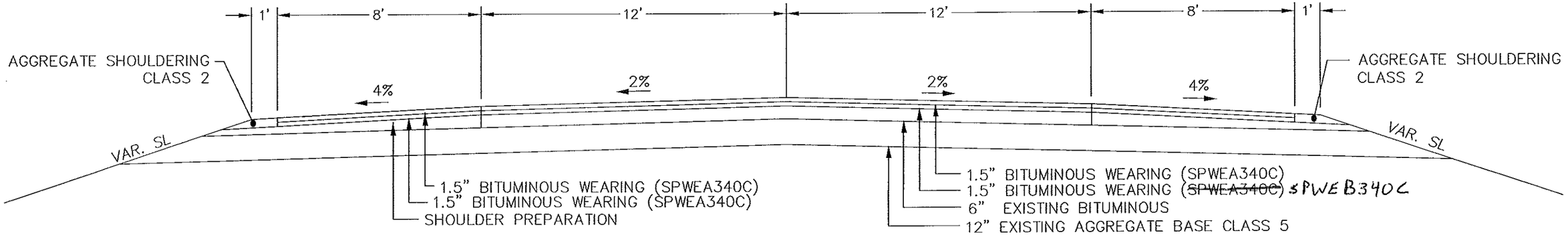
CERTIFIED BY Kaye M Bierwirth REG. NO. 19917 6/16 2009
LICENSED PROFESSIONAL ENGINEER

SAP 55-614-15

C.S.A.H. 14

STA. 460+78 TO 642+75

℄



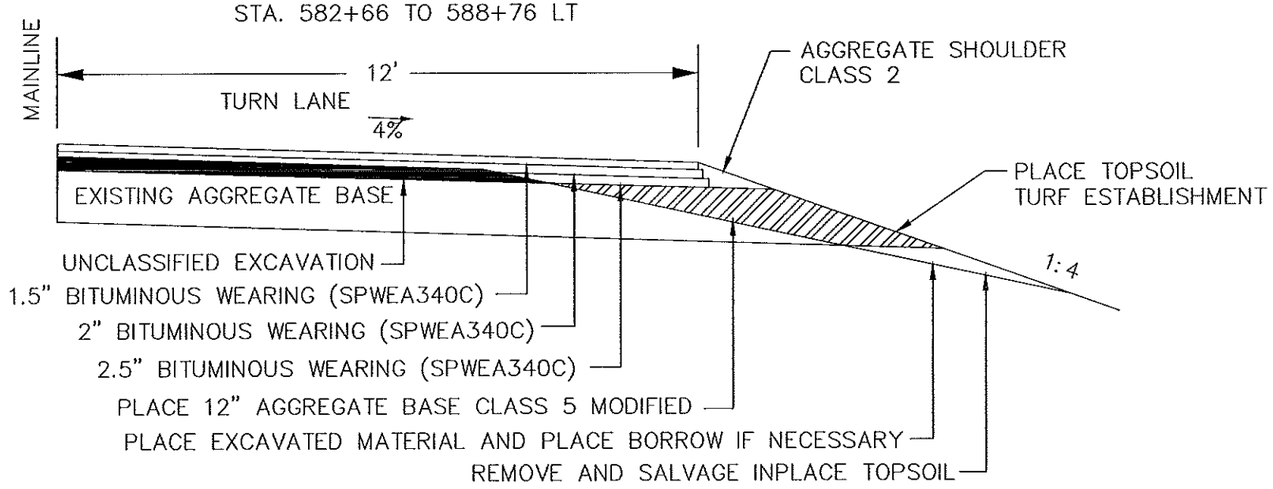
AS-BUILT

MAR 10 2011

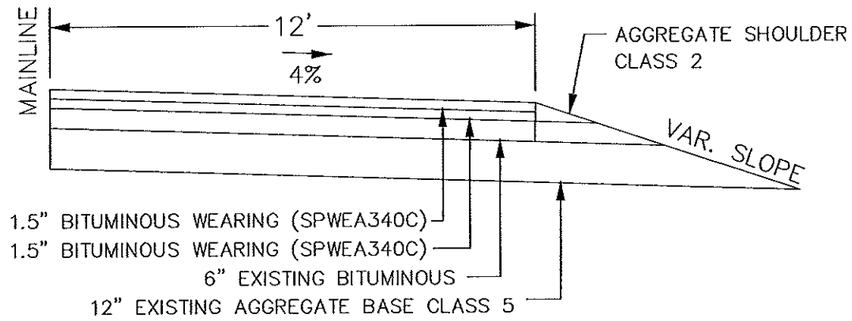
ENGINEERING

CONSTRUCT NEW BYPASS LANE

STA. 582+66 TO 588+76 LT



EXISTING TURN LANES & BYPASS LANES



STA 495+61 TO 499+74 RT
STA 500+08 TO 504+48 LT
STA 513+33 TO 517+08 LT
STA 522+60 TO 528+83 RT
STA 526+50 TO 530+63 LT
STA 575+01 TO 579+61 RT
STA 611+02 TO 618+25 RT
STA 613+24 TO 617+73 LT
STA 632+43 TO 637+23 LT
STA 642+74 TO 647+74 LT

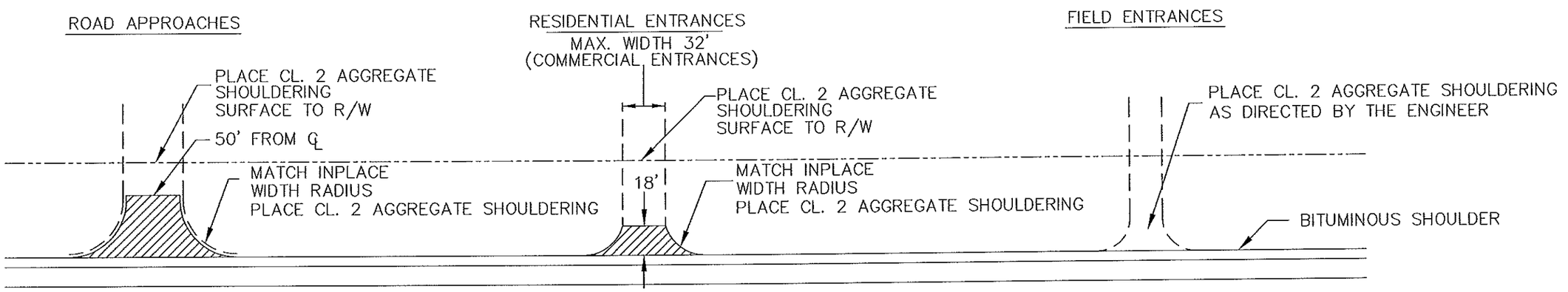
TYPICAL SECTIONS C.S.A.H. 14

CERTIFIED BY Kaye M Bruesch REG. NO. 19917 6/16 2009
LICENSED PROFESSIONAL ENGINEER

SAP 55-614-15

SHEET NO. 3 OF 9 SHEETS

COMMERCIAL ENTRANCES
FARM OR RESIDENTIAL ENTRANCES



	ROAD APPROACHES	FARM OR RESIDENTIAL ENTRANCES	FIELD ENTRANCES
C.S.A.H. 14	7 ①	34 ②	10

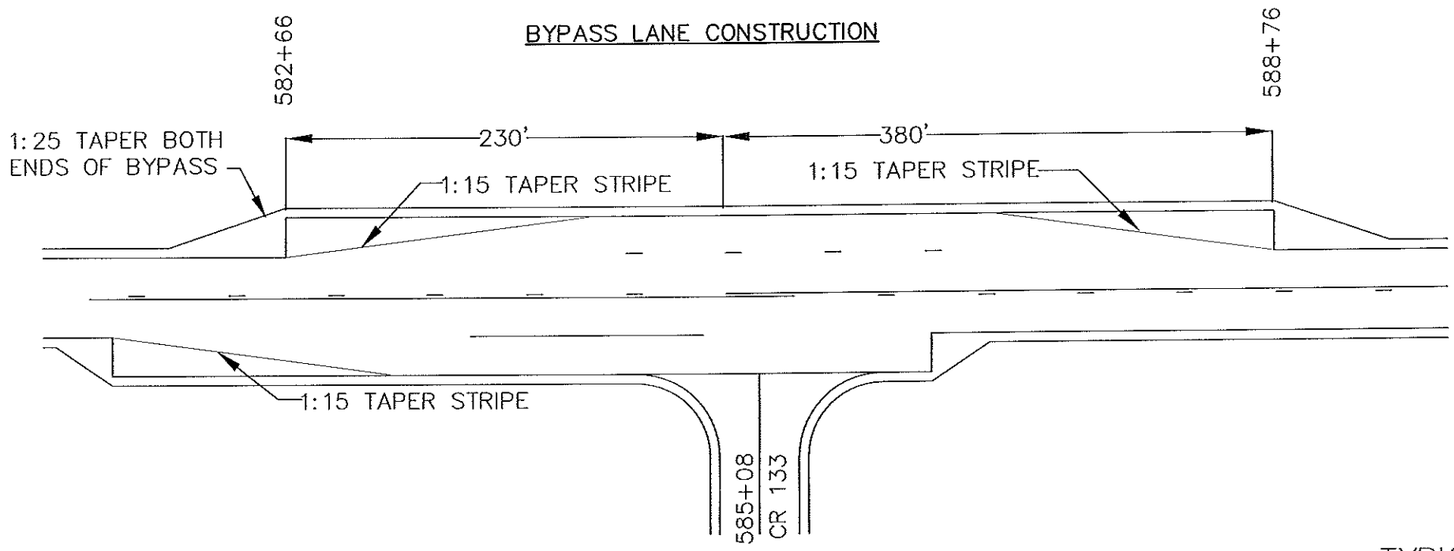
AS-BUILT
MAR 10 2011
ENGINEERING

① ON ROAD APPROACHES TO SURFACED ROADS, MILL A 3" TAPERED BUTT JOINT (APPROX 25') 3" AT MATCH POINT TO 0" EDGE OF SHOULDER. PAVE TWO 1.5" LIFTS OF BITUMINOUS.

② ON ELEVEN RESIDENTIAL ENTRANCES THAT ARE PAVED BEYOND 18', MILL A 3" TAPERED BUTT JOINT (APPROX. 10') 3" AT MATCH POINT TO 0" TOWARD CSAH 14. PAVE TWO 1.5" LIFTS OF BITUMINOUS.

▨ BITUMINOUS SURFACE

BYPASS LANE CONSTRUCTION



BYPASS LANE DETAIL
TYPICAL ENTRANCE DETAILS

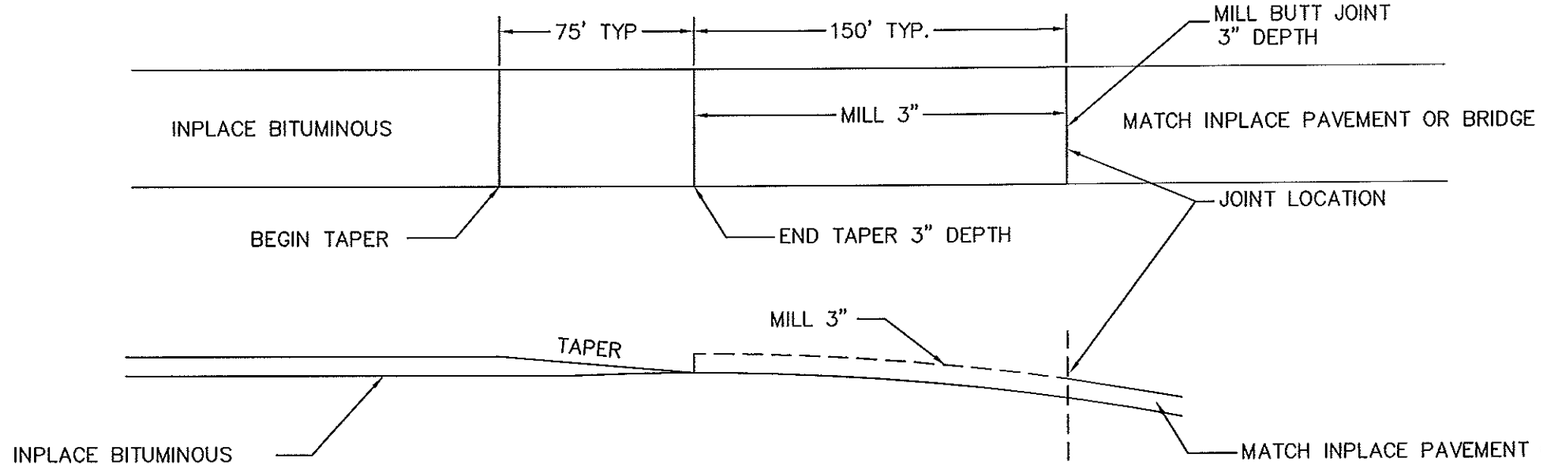
CERTIFIED BY Kaye M Bienich REG. NO. 19917 6/16 2009
LICENSED PROFESSIONAL ENGINEER

SAP 55-614-15

SHEET NO. 4 OF 9 SHEETS

MILLING DETAILS

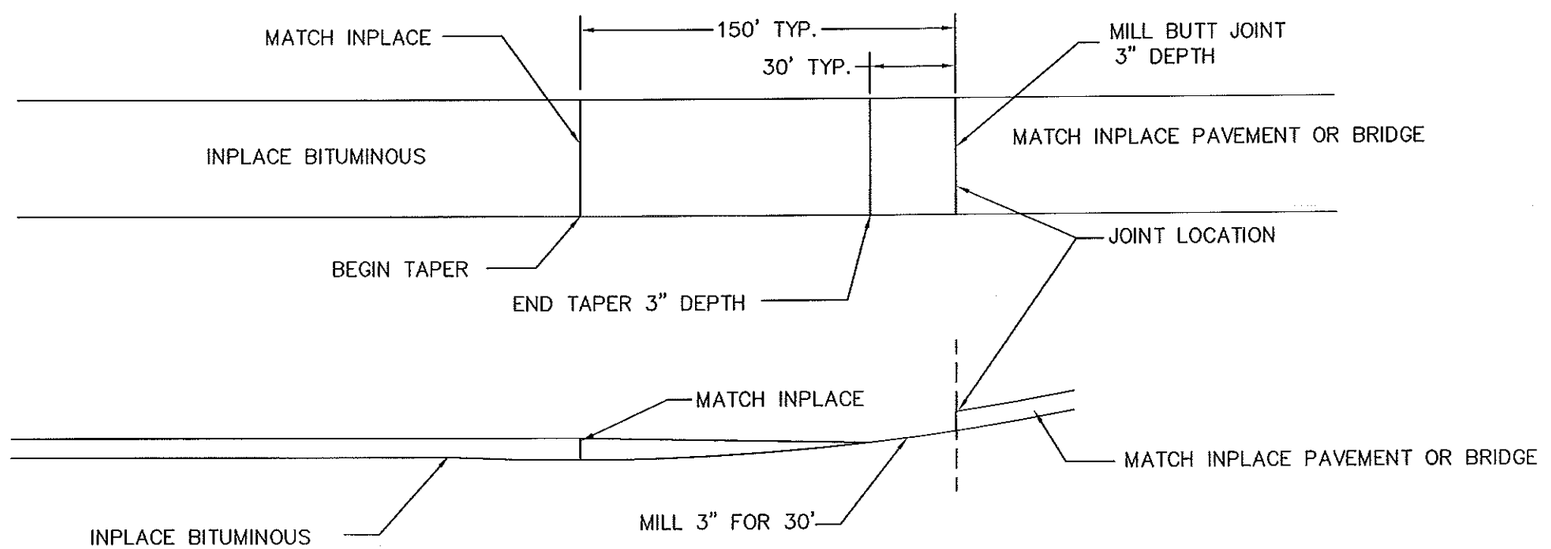
NEGATIVE CHANGE IN GRADE



AS-BUILT
MAR 10 2011
ENGINEERING

* NOTE: ALL MILLING AREAS WILL BE DESIGNATED BY THE ENGINEER

POSITIVE OR NO CHANGE IN GRADE



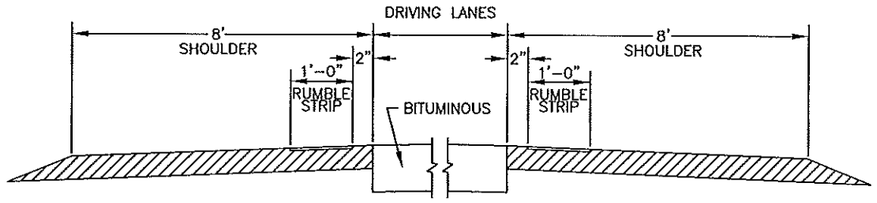
* NOTE: ALL MILLING AREAS WILL BE DESIGNATED BY THE ENGINEER

MILLING DETAILS

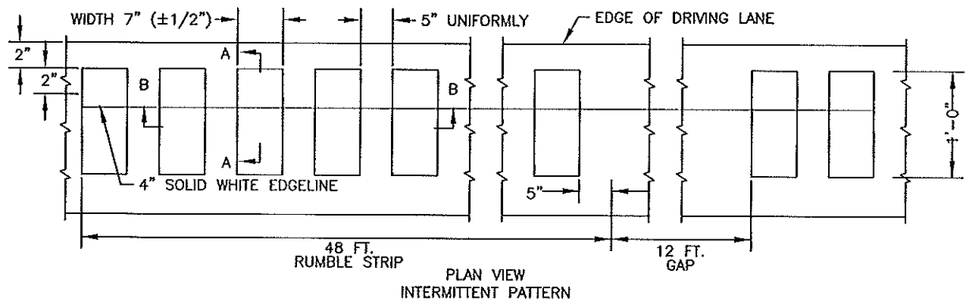
CERTIFIED BY Kaye M Briencik REG. NO. 19917 6/16 2009
LICENSED PROFESSIONAL ENGINEER

SAP 55-614-15

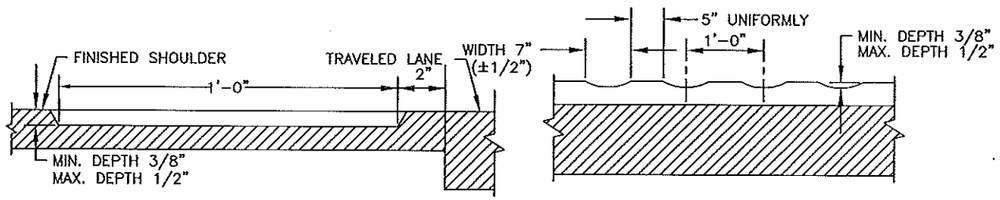
SHEET NO. 5 OF 9 SHEETS



SECTION VIEW OF TWO-LANE ROADWAY
(WITH 6'-0" TO 10'-0" PAVED SHOULDERS)

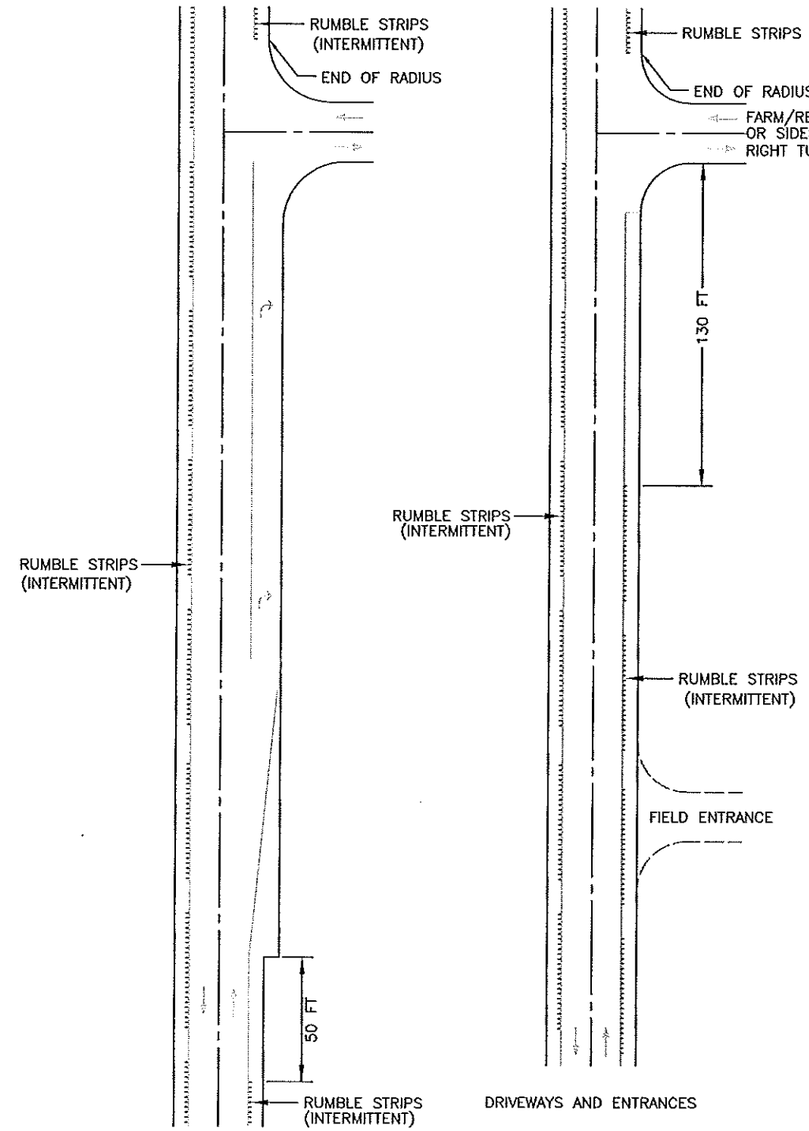


PLAN VIEW
INTERMITTENT PATTERN



SECTION A-A

SECTION B-B



RIGHT TURN LANE

DRIVEWAYS AND ENTRANCES

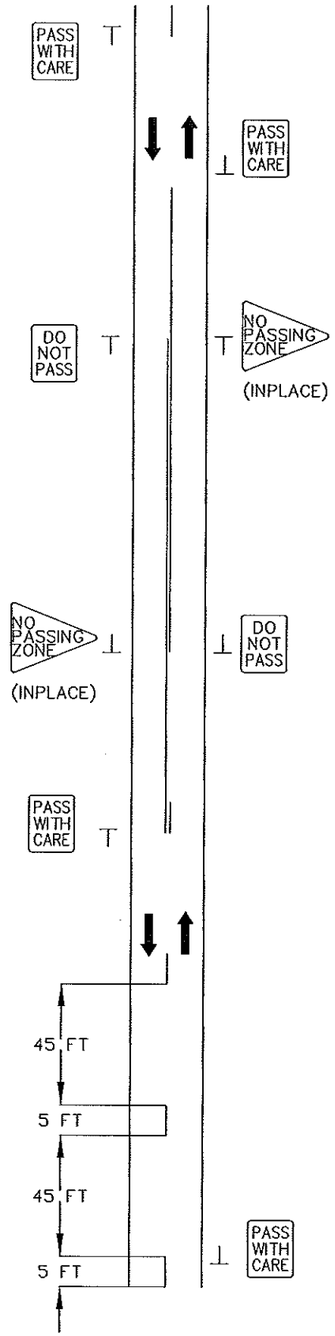
AS-BUILT
MAR 10 2011
ENGINEERING

EDGE LINE RUMBLE STRIP DETAILS

CERTIFIED BY Kay M Brenick REG. NO. 19917 6/16/2009
LICENSED PROFESSIONAL ENGINEER

SAP 55-614-15

INTERIM PAVEMENT MARKING LAYOUT
TWO LANE, UNDIVIDED



GENERAL NOTES:

1. PASS WITH CARE AND DO NOT PASS SIGNS SHALL BE INSTALLED AS SOON AS INPLACE PAVEMENT MARKINGS ARE REMOVED (I.E. MILLING OR BITUMINOUS RECLAIMATION).
2. INTERIM PAVEMENT MARKINGS SHALL BE INSTALLED ON FULL WIDTH, PAVED SECTIONS, OF THE ROADWAY AT THE END OF EACH DAYS PAVING OPERATIONS.
3. PLACEMENT OF INTERIM PAVEMENT MARKINGS SHALL BE DURING DAYLIGHT HOURS.
4. MATERIAL USED FOR INTERIM PAVEMENT MARKINGS SHALL BE HIGH SOLIDS WATER BASED TRAFFIC PAINT. APPLIED AT A 10 MIL THICKNESS.
5. ALL PERMANENT PAVEMENT MARKINGS INCLUDING EDGE LINES, AND CENTERLINE MARKINGS, SHALL BE INSTALLED WITHIN 14 CALENDAR DAYS AFTER COMPLETION OF AGGREGATE SHOULDERING OPERATIONS.

EMERGENCY SITUATIONS:

1. IN THE EVENT THAT IT IS NOT POSSIBLE TO INSTALL INTERIM PAVEMENT MARKING, REFLECTORIZED CONES SHALL BE USED TO DELINEATE THE CENTER LINE, CONTINUOUS SURVEILLANCE (24 HOURS PER DAY) OF THE CONES SHALL BE MAINTAINED. SPACING OF THE CHANNELIZING DEVICES SHALL BE 100 FT IN AREAS WHERE THE SPEED LIMIT IS 45 MPH OR GREATER AND 50 FT WHERE THE SPEED LIMIT IS 40 MPH OR LESS. THE CONTRACTOR SHALL HAVE AVAILABLE, A SUFFICIENT NUMBER OF REFLECTORIZED CONES OR OTHER PRE-APPROVED DEVICES TO COVER THE LENGTH OF ONE DAYS PAVING. THIS WORK SHALL BE CONSIDERED INCIDENTAL TO ITEM 2580.603 INTERIM PAVEMENT MARKING.

AS-BUILT
MAR 10 2011
ENGINEERING

STRIPING PLAN

CERTIFIED BY Kaye M Reinsch LICENSED PROFESSIONAL ENGINEER REG. NO. 19917 6/16 2009

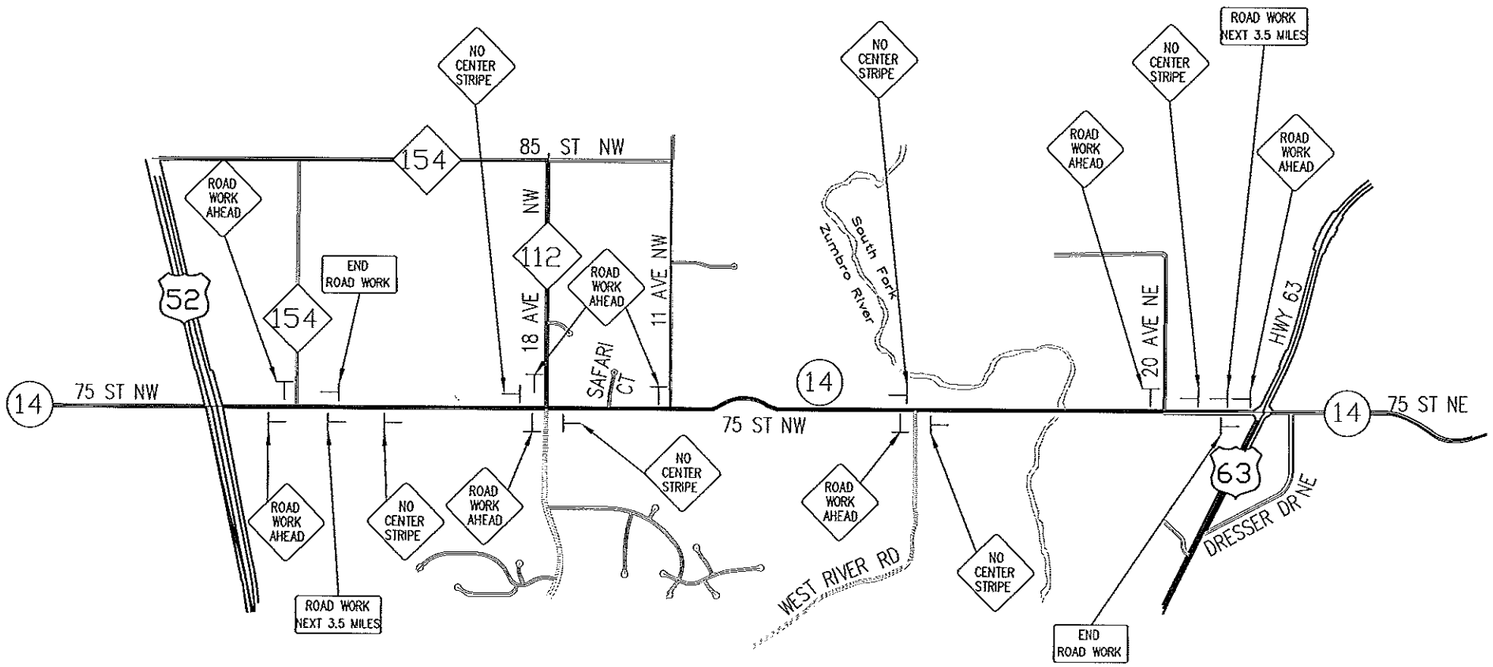
SAP 55-614-15

SHEET NO. 7 OF 9 SHEETS

TRAFFIC CONTROL NOTES

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TRAFFIC CONTROL FOR THIS PROJECT.
2. THE LOCATION OF SIGNS AND DEVICES WILL BE STAKED BY THE ENGINEER IN THE FIELD.
3. ALL TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES INCLUDING THE TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS FIELD MANUAL.
4. CONSTRUCTION ZONE SIGNING SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND WILL INCLUDE, BUT NOT BE LIMITED TO SIGNS FOR LANE CLOSURES, MACHINERY AHEAD, BUMP, DIP, LOOSE GRAVEL, ETC. THE NUMBER AND LOCATION WILL BE DETERMINED BY THE CONTRACTORS OPERATION.
5. THE CONTRACTOR SHALL INSTALL TRAFFIC CONTROL DEVICES FOR EDGE DROP OFFS AT THE END OF EACH WORK SHIFT AS THE SITUATIONS EXIST.

AS-BUILT
MAR 10 2011
ENGINEERING



ESTIMATE OF TRAFFIC CONTROL DEVICES

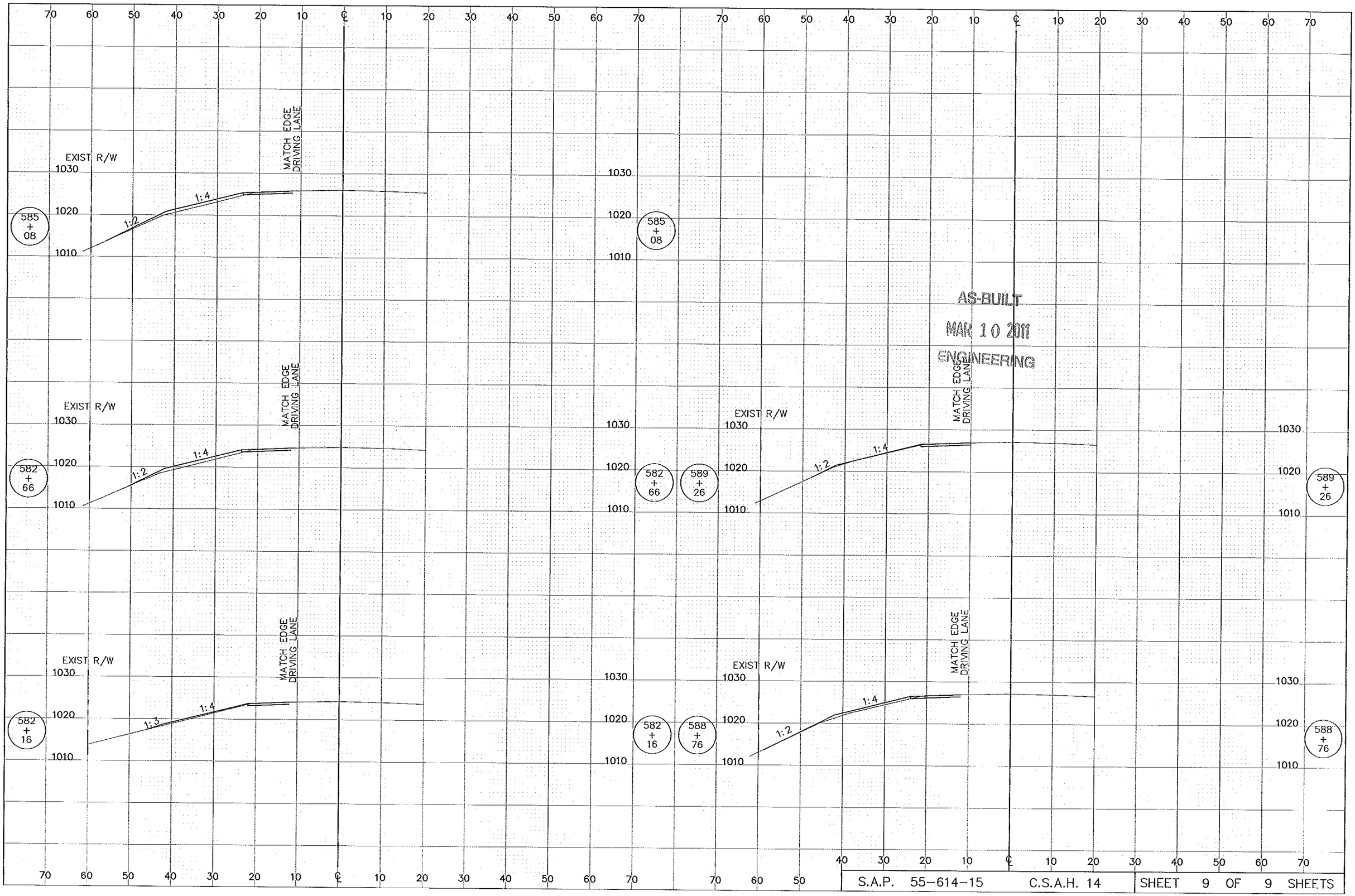
DEVICE	NUMBER	SIZE (INCHES)	COLOR	C.S.A.H. 14
DO NOT PASS	R4-1	24 x 30	BLK/WH	11
PASS WITH CARE	R4-2	24 x 30	BLK/WH	11
LOW SHOULDER	W8-9	48 x 48	BLK/OR	SEE NOTE #5
UNEVEN LANES	W8-11	48 x 48	BLK/OR	SEE NOTE #5
NO CENTER STRIPE	W8-12	48 x 48	BLK/OR	6
ROAD WORK AHEAD	W20-1	48 x 48	BLK/OR	8
NO SHOULDER	W21-X1	48 x 48	BLK/OR	SEE NOTE #5
END ROAD WORK	G20-2A	48 x 24	BLK/OR	2
ROAD WORK NEXT 3.5 MILES	G20-2A	48 x 24	BLK/OR	2
	REBOUNDABLE PLASTIC DRUM	APPROX. 36"	OR & WH	SEE NOTE #5

⊥ POST MOUNTED SIGN

TRAFFIC CONTROL

CERTIFIED BY Kaye M Reinisch REG. NO. 19917 6/16 2009
LICENSED PROFESSIONAL ENGINEER

SAP 55-614-15



AS-BUILT

MAR 10 2011

ENGINEERING

S.A.P. 55-614-15	C.S.A.H. 14	SHEET 9 OF 9 SHEETS